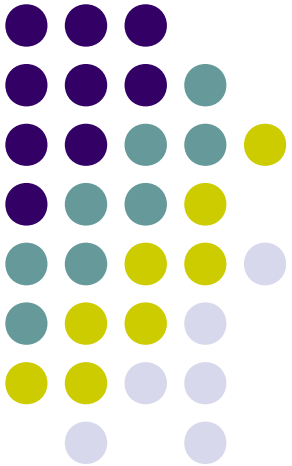
Planning Models Improvement Program (PMIP)

PCoP Conference

May 2006



Background

- PMIP – established in 2003
- **Purpose – carry out a process to review, improve and validate analytical tools and models used in CW business programs**
- Task Force Report – September 2003
- EC 1105-2-407 – Published May 2005
- Draft protocols report – published October 2005, under review

Planning Models

A representation of a system for a purpose

For certification purposes, a **planning** model is: **Any generic software package or spreadsheet or framework (i.e., HEP) used for water resources planning purposes.**

Engineering models – approved under Science Engineering and Technology (SET) Program

POLICY

- Use of certified models for all planning activities is mandatory

- Use of certified models does not replace need for ITR- still needed for input data and outputs and proper application of model.

CERTIFICATION PROTOCOLS: CRITERIA

- **Technical Quality**
  - Based on validated and accepted “state of the art” theory
  - Realistic representation of actual system
  - Clearly addresses identified analytical requirements
  - Assumptions are valid and support analytical requirements
  - Incorporates Corps policies and accepted procedures
  - Formulas (relationships) are correct
  - Computations are appropriate and done correctly
  - Clearly identified capabilities and limitations

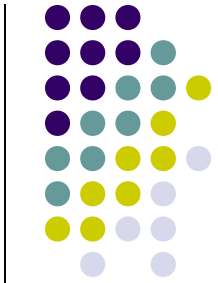
CERTIFICATION PROTOCOLS: CRITERIA

- **System Quality**
  - Supporting software tool/programming language and hardware platform are appropriate for the model
  - Programming was done correctly
  - Model has been tested and validated
  - Data/outputs can be readily imported into other software analysis tools.

CERTIFICATION PROTOCOLS: CRITERIA

- **Usability**
  - Quality data is readily available
  - Results format is adequate and understandable
  - Results provide useful information to users to support project analysis
  - Results can be exported into PM documentation
  - Training is readily available
  - Users documentation is readily available, is user friendly and complete
  - Adequate technical support is available
  - The software/hardware platform used is available to most users.
  - Model is easily accessible.
  - Model is transparent.

CERTIFICATION PROTOCOLS



- Detailed procedures and requirements for certification
- Various certification processes
  - Existing and new models
  - By type of model
    - Geographic applicability
    - Simple to complex
    - By category (levels 1 to 4 – EC 407)
    - By type: empirical, descriptive, statistical, theoretical, qualitative, quantitative, etc.
- To be applied consistently across PCXs
- Reflect industry practice

Status

- Draft protocols – under review
- Test models – HEC-FDA, BEACH-FX and In-Stream
- Test protocols – SOW submitted to contractors, negotiating proposals (Aug 06)
- Finalize protocols – based on comments and tests (Sep 06)